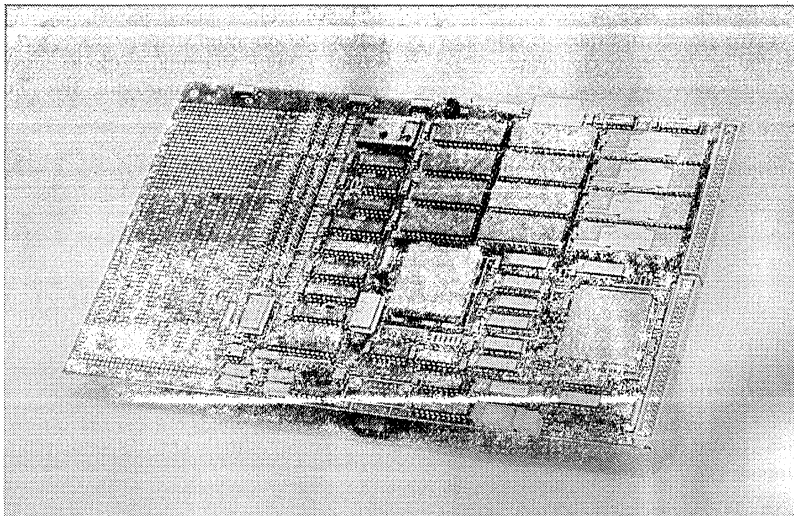


QT960 EVALUATION AND PROTOTYPING BOARD



270743-1

LOW COST EVALUATION TOOL

The QT960 products give you a 32-bit starter kit to begin software evaluation and hardware design at a low cost. The boards feature the 20 MHz 80960KB 32-bit embedded processor. The 80960KB has integrated floating point, instruction and register caches, and an on-chip interrupt controller. The 80960K-series are the first in a new architectural family of embedded processors from Intel built using Intel's CHMOS IV[†] process. These boards provide you with full access to the features of the 80960KB processor. A wire wrap prototyping area offers you easy access to board features to test your designs. Interleaved EPROM means fast execution of your code taking advantage of the 80960KB's burst bus. A programmable wait state generator simulates different memory environments useful in evaluating the performance of your code. These features make the QT960 boards useful low cost tools for the 32-bit embedded designer.

Once written, you can debug your program with NINDY, an EPROM resident debug monitor. NINDY enables you to download code, set seven different trace modes, display and modify memory or registers, and disassemble problem code sequences.

Available separately from Intel are the ASM-960 (assembly language) and iC-960 (high-level language) products which provide you with the code development environment for the QT960 boards.

The starter kit comes in two versions: the QT960F version has fast SRAM, high speed EPROM and Flash memory; the QT960E version has lower cost SRAM, Flash memory and no high speed EPROM. Each version has NINDY in either EPROM (QT960F) or Flash memory (QT960E), power supply cable, and the QT960 User Manual. Both versions also include the parts list, source code of the debug monitor, and the board data base (schematics) all on diskette. Armed with this starter kit you now have a system to evaluate and prototype your product ideas quickly and at low cost.

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FEATURES

QT960 FEATURES

- 20 MHz Execution Speed
- 128K Bytes to Zero Wait State EPROM[†]
- 128K Bytes of Flash Memory
- 128K Bytes of Zero Wait State SRAM[‡]
- Programmable Wait State Generator
- Prototyping Wire Wrap Area
- Five Instruction Traces
- Two Hardware Breakpoints
- Display/Modify Memory and Registers
- Code Disassembly
- High Level Language Support
- RS-232 Communications Link
- The QT960E Version has 128K Bytes of Two Wait State SRAM and 128K Bytes Four Wait State Flash Memory

Product Order Codes: EVQT960F20 and EVQT960E20

[†]CHMOS IV is a patented Intel process.

[‡]QT960F Version only.

FAST AND EASY CODE UPDATES

128K Bytes of Intel's 28F256 Flash memory provides an easy and quick method of changing your code in nonvolatile memory. Flash memory may be conveniently reprogrammed without removing it from the board while software is under development.

FAST EPROM

Interleaved fast EPROM (Intel's 27C202) on the QT960F[†] version yields one-zero-zero-zero wait state code access. It efficiently utilizes the four word burst capabilities of the 80960KB bus maximizing program performance.

PROTOTYPING SUPPORT

A prototyping wire wrap area is provided on board with access to the system's signals and buses. This area gives you access to the board's features and allows you to easily test design ideas. A system bus connector is also provided for off board prototyping.

PROGRAMMABLE WAIT STATE GENERATOR

A software programmable wait state generator enables you to quickly model various memory speeds. Under software control you can set over 16 different wait state combinations and evaluate the performance of your target system.

DMA

The board offers you eight DMA channels accessed through a NINDY library function using Intel's 82380. In addition, off board connectors provide DMA I/O capabilities.

FIVE INSTRUCTION TRACES AND TWO HARDWARE BREAKPOINTS

NINDY utilizes the built-in trace capabilities of the 80960KB to provide you with single step, supervisor, call, return, and branch instruction tracing offering you extensive debug capabilities for software examination and modification. Two hardware breakpoints enable you to break on and examine EPROM resident code.

FEATURES

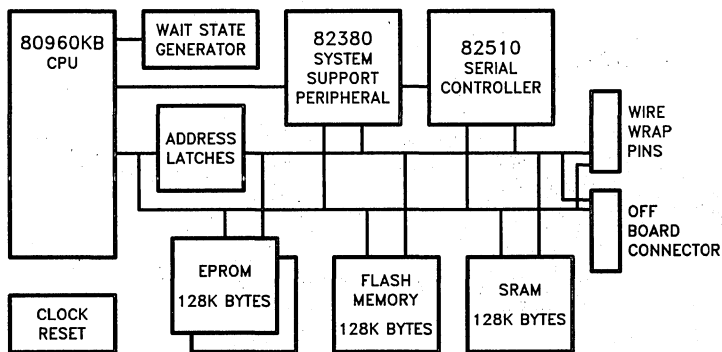
HIGH LEVEL LANGUAGE SUPPORT

NINDY is capable of downloading absolute object code generated by ASM-960 or iC-960. ASM-960 and iC-960 may be purchased separately from Intel.

COMMUNICATION AND SOFTWARE REQUIREMENTS

The QT960 boards communicate with the host through the RS-232 link using an Intel 82510 UART provided on board. The boards support five baud rates: 1200, 2400, 9600, 19200, and 38400. The default is 9600 baud. To communicate with the QT960 boards you must meet the following minimum software requirements:

- Terminal Emulator
- XMODEM Download Capabilities



Block Diagram of the QT960 Board

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For information or the number of your nearest sales office call 800-548-4752 (U.S. and Canada).
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